

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-002847**Date Inspected:** 04-Jun-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 2230**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 830**Contractor:** Japan Steel Works, Ltd.**Location:** Muroran, Japan**CWI Name:** N/A**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower, Jacking and Deviation Saddles**Summary of Items Observed:**

On this date OSM Quality Assurance (QA) Representative Daniel L. Reyes observed the repair welding on the saddle casting scheduled on this date. The following was observed:

At the start of the shift the QA inspector traveled to the Foundry Shop to observe the continued repair build-up welding of the casting ribs on the West Deviation Saddle identified as W2E1. The QA inspector observed Japan Steel Works, Ltd. (JSW) welding personnel, Kazuya-Komai ID 06-8002 performing the welding on the rib identified as 2L, area 3-8.

The welder performed the welding utilizing the Welding Procedure Specification (WPS) SJ-3026-2. The WPS was also used by the QA inspector as a reference during the verification of the welding parameters.

At the conclusion of verifying the preheat temperatures and the interpass temperatures, which measured accordingly, 198 degrees Celsius and 236 degrees Celsius. The QA inspector verified the Alternate Current (AC) welding parameters and were observed as follows; 204 amps and 24.5 volts with a travel speed measured at 147 Millimeters Per Minute (MM/M). The QA inspector did not observe the Shop Welding Supervisor in the immediate work vicinity at this time.

Later in the shift, at approximately 01:15 hours and 04:00 hours, the QA inspector observed the JSW Shop Welding Supervisor, Motoi-Hidaka verify the welding parameters for the welder Kazuya-Komai. At the conclusion of the welding parameters verification the welder resumed the repair build-up welding of the Rib 2L. The consumable used during the repair welding appeared to be a Hobart Brothers Product, LB-106 and the electrode diameter appeared to be 5.0 mm and complies with the AWS Specification A5.5 and the AWS Classification E10016-G.

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The QA inspector, at periodical intervals performed QA verification of the welding parameters, the steel surface temperatures and observed the in progress repair welding on the Rib identified as 2L.

The calibration dates of the measuring instruments utilized by the Shop Welding Supervisor, the clamp amp/volt meter and the digital surface thermometer, were previously verified by this QA inspector.

QA Observation Summary

This QA inspector randomly observed the in process Shielded Metal Arc Welding (SMAW) for the repair welding of the ribs on the West Deviation Saddles identified as W2E1. This QA inspector noted that it appeared the approved and latest revised WPS's were posted at the appropriate welding station and that each approved welder was entered in the latest revised Welding Personnel Log issued by Japan Steel Works, Ltd. The welding parameters, preheat and interpass temperatures were verified as noted by this QA inspector utilizing a Fluke 337 clamp meter for the electrical welding parameters and Tempilstik temperature indicators for preheat and interpass temperatures. The filler metal utilized at the welding stations was also verified. The Shop Welding Supervisor, Motoi-Hidaka appeared to perform the visual examinations and monitoring of the welding as per the contract documents. The welding and inspection was not completed during this shift and appeared to be in general compliance with the contract documents.

The following digital photographs illustrate the observations of the activities performed on this date.



Summary of Conversations:

There were no general conversations relative to this project on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Venkatesh Iyer, (858) 967-6363, who represents the Office of Structural Materials for your project.

Inspected By: Reyes,Danny

Quality Assurance Inspector

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Reviewed By: Lanz,Joe

QA Reviewer